

Work Order ID 50836

July 30, 2009 12:44:59 PM



Page 1

Item ID: D205-634-041

Accept



Setup Start



Revision ID: D

Stop



Item Name: Replacement Skidtube

Start Date: 07/30/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 08/07/2009 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

mf

Date:

09-07-30

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

D2580

Rev D

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy D205-634 bluefile & type labels per PPP D205-634-041 CHG002

N/A

110

0.00



BENDING MACHINE - SKIDTUBES

CNC Bend 1

Memo

0.00

CNC Delta 100 Bender

1-Bend as per program D2580.C on CNC Bender and Folio FT009

2-Cut tubes as per Dwg. D2580

) M 9-7-30

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Run Start



Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

120

0.00



Skidtubes

Memo

0.00

Skidtubes

1- Deburr ends

2- C'sink holes as per dwg without cutting fluid

3- Prepare tube for welding, remove alodine as required.

4- Scribe batch number insied aft end of tube.

M 9-7-31

①

130

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

=> 808/07/31

⑤

⑥

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

140

0.00



Skidtubes

Memo

0.00

Skidtubes

1-Weld step D2576 as per Dwg. D2580 and QSI 004
A/R 000 Aluminum Rod

M110295

BE 07/08/04

2-Prep per QSI 005 and weld crossbolt spacers D2579 as per Dwg. D2580, QSI 004.

For D2579 spacers, weld one side, pass 3/8" drill, weld other side, pass 3/8" drill
A/R 000 Aluminum Rod

M110295

BE 07/08/04

3-Grind welds as per Dwg D2580 Grind flush ridge made from bending

4-Drill holes for wearplates using DT 8217 & DT8937 Open holes to 19/64",
adjust stopper not to hit web. Debur

5-Counterbore crossbolt spacers to 7/16" ID x 1.0" deep as per Dwg D2580.
Debur holes

6-Drill pilot holes for aft cap using DT 8215 Open holes to 0.208". Debur




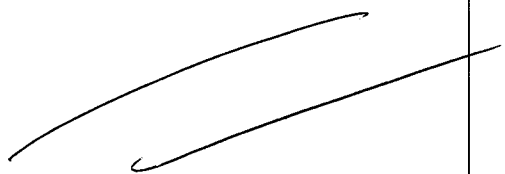
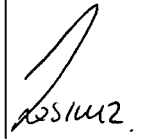
7-Drill pilot holes for Tow ring using DT8091, open to .640" and Debur

-AWM 9-8-5

(P10) →

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D205-634-041 PAR #: N/A Fault Category: Skedtube NCR: (Yes) No DQA: 18 Date: 09.08.26
 Resolution: Re-work Disposition: Re-work QA: N/C Closed: 18 Date: 09.08.27

NCR: 50836		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
9/8/4	#140.6	During drilling of 4th cap holes the tube moved and caused the hole to be ovalized. Hole should be 0.200"		Clean affected hole & weld per QSI 004. grind flush inside & cut. ensure proper wall thickness.	BE 09/08/05	S 09/08/05		S 09/08/05
		but measures 0.230". RL process/human error.			ANM 9-8-5			S 09/08/05

NOTE: Date & initial all entries

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Cust Item ID:

Required Date: 08/07/2009 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

150

QC10- Inspect visual per QSI004- ground welds

0.00



QC

Memo

0.00

Quality Control

=> 08/08/05

(X) /

160

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

=> 08/08/05

(X) /

170

Pressure Wash per QSI005 4.3

0.00



HandFinish

Memo

0.00

Hand Finishing

=> 09-08-06

(X) JF

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Start Date: 07/30/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 08/07/2009 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180 Powdercoat Powder Coating	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum M112260 Memo START TIME: 8:30am OVEN TEMPERATURE: 320°F FINISH TIME: 9:00am	0.00 0.00							
190 QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.00							

=> 09-08-06 Jc JV

Gen 09-08-10 @

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Cust Item ID:

Required Date: 08/07/2009 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

200

0.00



HandFinish

Memo

0.00

Hand Finishing

1-Install inserts & wearplates & Gaskets as per Dwg. D2580. Use a drop of Sikaflex on insert holes before installing wearplates
A/R ☐ ☐ ☐ Sikaflex-291 ☐ mm557
Sikaflex expire date: 10/01

2-Coat D2594-3 O' rings with Petroleum Jelly and install on D2594-1 plugs as per Dwg D2580

3-Inspect for foreign object per QSI 024

4-Install 2855 Aft Cap as per Dwg D2580 and seal Fwd Step & Aft Cap with Sikaflex. Clean excess adhesive
A/R ☐ ☐ ☐ Sikaflex-291 ☐ mm557
Sikaflex expire date: 10/01

5-Wing Walk as per Dwg D2580 and QSI 005 4.4
Batch: mm12100

X1MO 09/08/10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Start Date: 07/30/2009 Start Qty: 1.00

Cust Item ID:

Required Date: 08/07/2009 Req'd Qty: 1.00

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

210

QC5- Inspect part completeness to step on W/O

0.00

QC

Memo

0.00

Quality Control

Inspect Aft Cap, Fwd Step and Wing Walk of work to Current Step Inspect for
Foreign objects per QSI 024

27 8 09/08/10

220

Packaging

0.00

Packaging

Memo

0.00

Packaging

Identify and pack for shipping as per PPPD205-634-041
Location: _____
PPP Rev: _____

PPP

51035
9/8/25

10 SP

230

QC21- Final Inspection - Work Order Release

0.00

QC

Memo

0.00

Quality Control

09/08/25

09-8-25

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

Picklist Print

July 30, 2009 12:44:58 PM

Page 1

Work Order ID: 50836

Parent Item: D205-634-041RevD

Parent Item Name: Replacement Skidtube

Comments:

Start Date: 07/30/2009

Required Date: 08/07/2009

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2580-1RevD		Manufactured	No			110	Each	7.0000	1.0000			
205 Skidtube bent detail												

Warehouse
Location

Loc Qty

Loc Code

Main Warehouse

ST

7

48616

1

50760

6

BS0758 ① 11-7-30

D2576-3RevG

Manufactured No

140

Each

165.0000

1.0000

Step (maching detail)

Warehouse
Location

Loc Qty

Loc Code

Main Warehouse

ST

165

43504

62

46661

103

1 RE 07-08-04

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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Picklist Print

July 30, 2009 12:44:58 PM

Work Order ID: 50836

Parent Item: D205-634-041RevD

Parent Item Name: Replacement Skidtube


Comments:

Start Date: 07/30/2009

Required Date: 08/07/2009

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2579RevE		Manufactured	No			140	Each	432.0000	20.0000			
												
Crossbolt Spacer												

Warehouse Loc Qty Loc Code
Location

Main Warehouse

ST	432
43988	4
46434	4
46956	12
47797	358
48272	54

20

11 9-7-31

D2855RevA

Manufactured No

200

Each

67.0000

1.0000



Cap

Warehouse Loc Qty Loc Code
Location

Main Warehouse

FP6	52
50513	52

Main Warehouse

ST	15
10360	2
35663	7
41340	1
42343	3
42806	2

X1

MD 09/08/10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Required Date: 08/07/2009

Comments:

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Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
AN3-5A  Bolt		Purchased	No			200	Each	2,560.000	2.0000			

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

2560

100188

246

105057

2246

15205

68

X2 MD 09/08/10

AN960JD10L

Purchased

No

200

Each

6,913.000

2.0000

Washer

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

6913

101291

16

104885

153

105793

236

109632

1508

110985

5000

X2 MD 09/08/10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Parent Item Name: Replacement Skidtube

Comments:

Start Date: 07/30/2009

Required Date: 08/07/2009

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
ALS7-1032-130		Purchased	No			200	Each	3,706.000	50.0000			

Insert

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

105855

108606

111529

111779

110511

3706

16

52

1638

2000

x50 MD 09/08/10

AN3C4A

Purchased

No

200

Each

2,121.000

50.0000

BOLT

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

112082

112314

2121

121

2000

x50 MD 09/08/10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Required Date: 08/07/2009

Comments:

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Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	--------------------------	---------------	----------------	--------

AN960C10L		Purchased	No			200	Each	4,641.000	50.0000			
-----------	--	-----------	----	--	--	-----	------	-----------	---------	--	--	--



washer

Warehouse Loc Qty Loc Code

Location

OFFSHORE

FG 100

103585 100

Main Warehouse

ST 4541

112116 4541

D3566-13RevC		Manufactured	No			200	Each	48.0000	1.0000			
--------------	--	--------------	----	--	--	-----	------	---------	--------	--	--	--



Gasket

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST 48

45717 1

46889 5

47435 8

48166 18

50265 16

X50 MD 09/08/10

X MD 09/08/10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Required Date: 08/07/2009

Comments:

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Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	--------------------------	---------------	----------------	--------

D3566-5RevC

Manufactured

No

200

Each

23.0000

1.0000



Gasket

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

23

36113

1

46186

1

47318

1

48167

20

D3566-1RevC

Manufactured

No

200

Each

24.0000

2.0000



Gasket

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

24

46349

1

47434

2

48165

10

48557

11

X1 MD 09/08/10

X2 MD 09/08/10

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Shop Packet Print

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Required Date: 08/07/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D3564-11RevD		Manufactured	No			200	Each	31.0000	1.0000			
Wearshoe												

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST	31	
45823	1	
47432	8	
48553	12	
50112	10	

X1 MD 09/08/10

D3564-13RevD

Manufactured No

200

Each

56.0000

1.0000



Wearshoe

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
FP17	35	
48554	13	
50270	22	
Main Warehouse		
ST	21	
45409	3	
46495	10	
47867	8	

X1 MD 09/08/10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

July 30, 2009 12:44:58 PM

Work Order ID: 50836



Parent Item: D205-634-041RevD



Parent Item Name: Replacement Skidtube

Start Date: 07/30/2009

Required Date: 08/07/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D3564-9RevD 		Manufactured	No			200	Each	18.0000	1.0000			
Wearshoe												

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST 18

44659 1

45825 1

47316 4

48556 12

D3564-5RevD

Manufactured No

200

Each

23.0000

1.0000



Wearshoe

Warehouse Loc Qty Loc Code

Location

OFFSHORE

FG 2

34806 2

Main Warehouse

FP19 12

48555 12

Main Warehouse

ST 9

45824 1

47433 1

48164 7

XI mp 09/08/10

XI mp 09/08/10

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 9

July 30, 2009 12:44:58 PM

Work Order ID: 50836



Parent Item: D205-634-041RevD



Parent Item Name: Replacement Skidtube

Start Date: 07/30/2009

Required Date: 08/07/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2594-3RevC		Manufactured	No			200	Each	918.0000	16.0000			
O-Ring, 205 Skidtube												

Warehouse Loc Qty Loc Code
Location

Main Warehouse

ST	918	
27168	44	
29908	874	

D2594-1RevC

Manufactured No

200 Each 716.0000 16.0000



Plug, 205 Skidtube

Warehouse Loc Qty Loc Code
Location

Main Warehouse

ST	716	
42221	16	
42807	92	
43884	103	
46435	3	
7251	502	

X16 MD 09/08/10

X16 MD 09/08/10

July 30, 2009 12:44:58 PM

Shop Packet Print

Page 9

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART

DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD. HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D2580	REV. D SHEET 1 OF 3
DATE 07.02.27		TITLE 205 SKIDTUBE ASSEMBLY	SCALE NTS
A	96.09.16	NEW ISSUE	
B	96.12.02	AS MANUFACTURED	
C	98.08.26	REDRAWN, INCLUDED DEO 9094/9097	
D	07.02.27	CHANGE TO SS WEARPLATES AND GASKETS, INCLUDE DEO 9124/9183	

RELEASED
07-06-28 *[Signature]*

QTY -041	QTY -045	Part Number	Description
X		D2580-041	SKIDTUBE ASSEMBLY
	X	D2580-045	SKIDTUBE ASSEMBLY
1	1	D2500-1-190	EXTRUSION
1	1	D2576-3	STEP
20	24	D2579	CROSS BOLT SPACER
16	16	D2594-1	PLUG
16	16	D2594-3	O-RING
1	1	D2596	205 WEB
1	1	D2855	AFT CAP
1	1	D3564-5	WEARSHOE
1	1	D3564-9	WEARSHOE
1	1	D3564-11	WEARSHOE
1	1	D3564-13	WEARSHOE
2	2	D3566-1	GASKET
1	1	D3566-5	GASKET
1	1	D3566-13	GASKET
50	50	ALS7-1032-130 or AKS7-1032-130 or AKS4-1032-130 or AELS-1032-130	INSERT
50	50	AN3C4A	BOLT
2	2	AN3-5A	BOLT
50	50	AN960C10L	WASHER
2	2	AN960JD10L	WASHER

GENERAL NOTES:

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 2) ALL DIMENSIONS ARE IN INCHES
- 3) INSERT D2596 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP.
- 4) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 5) USE DART DRILL TEMPLATE TD2577-205 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTION D-D (50 PLACES) AFTER FINISH. INSTALL AN3C4A BOLTS AND AN960C10L WASHERS WITH SIKAFLEX-241/-291.
- 6) WELDING TO BE DONE PER DART QSI 004.
- 7) FINISH:
SEE NOTES ON
PAGE 2 FOR D2580-041 AND
PAGE 3 FOR D2580-045
- 8) INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (16 PLACES).

*#50839
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

RELEASED
07-06-28

Diagram illustrating the underside of the D2576-3 step, showing the locations for grinding flush (4 places) and the location ridge on the underside of the D2576.

D2579 SPACER

D2596 WEB (REF)

ALS7-1032-130 (REF)
(TYP 50 PLACES)

AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR .0508 HOLES ONLY:

1. CHAMFER HOLE .050 X 45°
2. INSERT D2579 SPACER (20 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. C'BORE D2579 SPACER TO .0437 X 1.00 DEEP

i) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB POWDER COAT ASSEMBLY GLOSS WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3 BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4

[illegible]

D3560-041 ASSEMBLY DETAIL

WELD AS PER DETAIL B

BLACK ANTI-SKID TO 0.5 ABOVE LOCATION RIDGE

BLACK ANTI-SKID TOP OF STEP TO 0.5 ABOVE BOTTOM EDGE

0.5

1.5

1.5

D

8

1.5

1.5

1.5

P

P

P

P

P

P

P

REFER TO DETAIL C

D3566-1

D3566-5

D3566-1

D3566-13

D3564-11

D3564-5

D3564-9

D3564-13

AN3C4A BOLT (1)

AN96CC10L WASHER (1)

(50 PLACES)

DESIGN	D	DRAWN BY	
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DATE			
07.02.27			

DRAWING NO.	REV. D
D2580	SHEET 2 OF 3
TITLE	SCALE
205 SKIDTUBE ASSEMBLY	1:24

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

RELEASED
07 Dec 28

Diagram illustrating the grinding locations for the D2576-3 step. The diagram shows a cross-section of the step with the following labels:

- GRIND FLUSH (4 PLACES)
- GRIND FLUSH
- D2576-3 STEP
- LOCATION RIDGE ON UNDERSIDE OF D2576
- $\frac{1}{4}$

Diagram illustrating the rear of the engine with the following components and instructions:

- #0.208 DRILL PRIOR TO D2855 CAP INSTALLATION (2 PLACES)**: Points to two small circles on the rear plate.
- SEAL WITH SIKAFLEX-241/-291**: Points to the area around the rear plate.
- AN3-5A BOLT (1)** and **AN960JD10L WASHER (1) (2 PLACES)**: Points to the bolt and washer assembly on the rear plate.
- D2855 CAP**: Points to the cap on the rear plate.
- SEE NOTE ii)**: Points to the rear plate area.
- 0.40**: Dimension indicating the distance from the center of the bolt to the edge of the rear plate.

D2579 SPACER

D2596 WEB (REF)

AL57-1032-130 (REF)
(TYP 50 PLACES)

AFTER PERFORM

1. CHA
2. INSU
3. WEL
4. C'B'

i) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB
POWDER COAT ENTIRE ASSEMBLY GREEN (REF. 4.3.5.8) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4

ii) IT IS ACCEPTABLE TO GRIND A RELIEF IN THE D2855 AFT CAP TO PREVENT INTERFERENCE
WITH THE SPACER AT THIS LOCATION

37.50
DISTANCE TO AFT END
OF D2596 WEB

3
7

1.750 1.750

0.508 (TYP.)
(40 PLACES)

REFER TO DETAIL E

REFER TO DETAIL A

8.750

17.375

26.000

34.188

57.313 (REF)
7 EQUAL SPACES
8.188 PITCH

38.0

91.500

190.0
(D2500-1)

(MAKE FROM D2580-1 DRILLING DETAIL)

Technical drawing of a curved pipe section. Dimensions and callouts include:

- Overall length: 51.340
- Distance from left end to first hole: 5.985
- Distance between first and second holes: 5.338 (REF)
- Distance from second hole to third hole: 3.630 (REF)
- Distance from third hole to end: 39.580
- Radius of curvature: $R = 0.508$ (8 PLACES)
- End radius: $R = 0.640$
- End angle: 20.0
- End height: 11.0
- Distance between hole and tangent point (left): 1.0
- Distance between hole and tangent point (right): 1.0
- Left tangent point offset: 1.4
- Right tangent point offset: 32.0 \pm 1.0
- Left hole offset: 13.4
- Callout 4: Points to the left end of the pipe and the left tangent point.

[illegible]

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07.02.27

205 SKIDTUB

ASSEMBLY

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

• NOTE: Date & initial all entries

NO. 205

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job number: D205 634 041 50835
Part number: D205 634 041
Description: 205 skid tube
Welding Process: Tig[☒] Mig[]
Base material: Aluminium
Current: AC[☒] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[]
Penetration: pass[☒] fail[]

UNACCEPTABLE

Cracks: pass[☒] fail[]
Undercut: pass[☒] fail[]
Pin holes: pass[☒] fail[]
Overlap (cold lap): pass[☒] fail[]
Porosity (surface): pass[☒] fail[]
Coloration: pass[☒] fail[]

Qualifier [Signature] Date of Test Coupon 09-07-30

Welder [Signature] Date of Test Coupon 09/07/30

The above named individual is qualified in accordance with AWS D17.1.2001 to weld